1.What are the two values of the Boolean data type? How do you write them?

***ANS:***

True and False

2. What are the three different types of Boolean operators?

***ANS:***

AND, OR, NOT

3. Make a list of each Boolean operator's truth tables (i.e. every possible combination of Boolean values for the operator and what it evaluate ).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***ANS:***  condition 1 (e.g., X) | condition 2 (e.g., Y) | NOT X ( ~ X ) | X AND Y ( X && Y ) | X OR Y ( X || Y ) |
| false | false | true | false | false |
| false | true | true | false | true |
| true | false | false | false | true |
| true | true | false | true | true |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5)

not (5 > 4)

(5 > 4) or (3 == 5)

not ((5 > 4) or (3 == 5))

(True and True) and (True == False)

(not False) or (not True)

5. What are the six comparison operators?

***ANS:***

Less than(<), Greater than(>), Less than or equal to(<=), Greater than or equal to(>=), Equal to(==) and Not equal to (!=)

6. How do you tell the difference between the equal to and assignment operators?Describe a condition and when you would use one.

***ANS:***

Equal to is “==” and assignment of operator is “=”

eg. a == 0 is equal to and a = 0 is an assignment

7. Identify the three blocks in this code:

***ANS:***

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')

8. Write code that prints Hello if 1 is stored in spam, prints Howdy if 2 is stored in spam, and prints Greetings! if anything else is stored in spam.

***ANS:***

spam = input()

if spam == 1:

print('Hello')

elif spam == 2:

print('Howdy')

else:

print('Greetings!')

9.If your programme is stuck in an endless loop, what keys you’ll press?

***ANS:***

Using keyword: break

10. How can you tell the difference between break and continue?

when break keyword comes, it terminates the execution of the current loop and passes the control over the next loop or main body, whereas when continue keyword is encountered, it skips the current iteration and executes the very next iteration in the loop.

11. In a for loop, what is the difference between range(10), range(0, 10), and range(0, 10, 1)?

***ANS:***

range(10) = range stops at 10

range(0, 10) = range start and stop point is given

range(0, 10, 1) = range start, stop and step is given

12. Write a short program that prints the numbers 1 to 10 using a for loop. Then write an equivalent program that prints the numbers 1 to 10 using a while loop.

***ANS:***

for i in range(1, 11):

print(i, end=" ")

print()

***ANS:***

i = 1

while(i<=10):

print(i)

i += 1

13. If you had a function named bacon() inside a module named spam, how would you call it after importing spam?

***ANS:***

Spam.bacon()